

Appl. No. 10/817,055
Amendment dated April 6, 2007

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) An intraoral data input tool for use during dental
- 2 examination of a patient, said tool comprising:
- 3 a handle, said handle being generally cylindrical, the diameter
- 4 of said handle being much smaller than the length of said handle, said
- 5 handle being configured to be held between the thumb and first and second
- 6 fingers of a dental examiner's hand; and
- 7 a discoid head rigidly attached to a first end of said handle, said
- 8 discoid head being generally flat and thin with a largest dimension of
- 9 approximately 2.5 centimeters, said discoid head having first and second
- 10 parallel flat surfaces on opposite sides of said head and a circumferential
- 11 surface, said discoid head including a data input device, said data input
- 12 device being responsive to force applied by a stylus, said discoid head being
- 13 configured to allow a dental examiner to input data using said stylus on said
- 14 input device when said discoid head is comfortably positioned at least
- 15 partially within said patient's mouth[.];
- 16 wherein said handle is rigidly attached to said circumferential
- 17 surface.

Appl. No. 10/817,055
Amendment dated April 6, 2007

1 2. (Canceled)

1 3. (Currently amended) The intraoral data input tool of claim ~~[[2]]~~ 1 further
2 comprising an extrusion rigidly attached to the perimeter of said discoid head
3 diametrically opposite to said handle, said extrusion extending radially from
4 said discoid head, said extrusion being configured to allow said dental
5 examiner to place one or more fingers of said examiner's stylus bearing hand
6 against said extrusion to provide extra stability when inputting data with said
7 stylus.

1 4. (Original) The intraoral data input tool of claim 1 wherein said data input
2 device comprises a multiplicity of push buttons.

1 5. (Original) The intraoral data input tool of claim 4 wherein each of said
2 push buttons has a top surface area in the range of 1 to 2 square millimeters.

1 6. (Original) The intraoral data input tool of claim 1 wherein said data input
2 device comprises a touch sensitive display.

1 7. (Original) The intraoral data input tool of claim 1 wherein said head
2 further includes a mirror.

Appl. No. 10/817,055
Amendment dated April 6, 2007

1 8. (Original) The intraoral data input tool of claim 7 wherein said data input
2 device comprises a multiplicity of push buttons located peripherally about
3 said mirror.

1 9. (Currently amended) The intraoral data input tool of claim 7 wherein said
2 head is discoid having first and second parallel flat surfaces on opposite
3 sides of said head and wherein said data input device and said mirror are
4 positioned on said first and said second flat surfaces respectively.

1 10. (Original) The intraoral data input tool of claim 1 wherein said head
2 further includes a display.

1 11. (Original) The intraoral data input tool of claim 1 further comprising a
2 translucent disposable cover.

1 12. (Original) The intraoral data input tool of claim 11 further comprising a
2 clamp configured to keep said disposable cover conformal with the surface of
3 said data input device.

1 13. (Original) The intraoral data input tool of claim 1 further comprising a
2 wireless communication device contained within said handle, said
3 communication device being electrically connected to said data input device.

Appl. No. 10/817,055
Amendment dated April 6, 2007

1 14. (Original) The intraoral data input tool of claim 1 further comprising:
2 an electrical connector attached to a second end of said
3 handle; and
4 an electrical cable connecting said electrical connector to said
5 data input device.

1 15. (Original) The intraoral data input tool of claim 1 wherein said stylus is a
2 dental probe.

1 16. (Currently amended) A dental data input system comprising:
2 a handle, said handle being generally cylindrical, the diameter
3 of said handle being much smaller than the length of said handle, said
4 handle being configured to be held between the thumb and first and second
5 fingers of a dental examiner's hand;
6 a discoid head rigidly attached to a first end of said handle, said
7 head including a data input device, said head being configured to be
8 generally flat and thin with a largest dimension of approximately 2.5
9 centimeters, said discoid head having first and second parallel flat surfaces
10 on opposite sides of said head and a circumferential surface; and
11 a stylus;
12 wherein said data input device is responsive to force applied by
13 said stylus, and said intraoral data input tool is configured to allow a dental
14 examiner to input data using said stylus on said data input device when said

Appl. No. 10/817,055
Amendment dated April 6, 2007

15 input device is comfortably positioned at least partially within a patient's
16 mouth, and said handle is rigidly attached to said circumferential surface.

1 17. (Original) A dental data input system as in claim 16 wherein said stylus
2 is a dental probe.

1 18. (Original) A dental data input system as in claim 16 further comprising a
2 controller with an operating program, said controller being linked to said
3 intraoral data input tool by a communication means.

1 19. (Original) A dental data input system as in claim 18 wherein said
2 communication means comprises an electrical cable.

1 20. (Original) A dental data input system as in claim 18 wherein said
2 communication means is a wireless communication means.

1 21. (Original) A dental data input system as in claim 18 wherein said
2 operating program includes a routine for periodontal examination.

1 22. (Original) A dental data input system as in claim 18 wherein said
2 operating program includes a routine for dental charting.

1 23. (Original) A dental data input system as in claim 18 further comprising:

Appl. No. 10/817,055
Amendment dated April 6, 2007

- 2 a display electrically connected to said controller; and
- 3 a keyboard electrically connected to said controller.

1 24. (Original) A dental data input system as in claim 18 further comprising a
2 voice synthesizer electrically connected to said controller.

1 25. (Original) A dental data input system as in claim 18 further comprising
2 an auxiliary input device electrically connected to said controller.

26-41 (Previously canceled)

1 42. (Previously presented) The intraoral data input tool of claim 1 wherein
2 said head comprises:
3 a rigid pan;
4 a circuit board positioned within said pan, said circuit board
5 including push buttons and a display, said circuit board having a central
6 cutout;
7 a mirror positioned within said central cutout of said circuit
8 board; and
9 a flexible plastic cover positioned over said mirror and said
10 circuit board, said cover forming the top surface of said head, said cover
11 being configured to hermetically seal said circuit board and said mirror within
12 said head.

Appl. No. 10/817,055
Amendment dated April 6, 2007

1 43. (Previously presented) The intraoral data input tool of claim 1 wherein
2 said head comprises:
3 a rigid pan;
4 a circuit board positioned within said pan, said circuit board
5 including push buttons and a display;
6 a mirror positioned over said circuit board, said mirror having
7 apertures for said push buttons and said display; and
8 a gasket positioned between said circuit board and said mirror,
9 said gasket hermetically sealing all of said apertures in said mirror and
10 hermetically sealing said mirror to the periphery of said rigid pan.

1 44. (Previously presented) The intraoral data input tool of claim 1 wherein
2 the length of said handle is approximately 13 centimeters.

1 45. (Canceled)

1 46. (Currently amended) The intraoral data input tool of claim [[45]] 1
2 wherein the diameter of said handle is smaller than the length of said handle,
3 the long axis of said handle being in a plane containing a diameter of said
4 discoid head.

Appl. No. 10/817,055
Amendment dated April 6, 2007

1 47. (Previously presented) The intraoral data input tool of claim 46 wherein
2 said plane is perpendicular to said first flat surface.

1 48. (Previously presented) The intraoral data input tool of claim 9 wherein
2 said data input device comprises push buttons, a display and a touch
3 sensitive display.

1 49. (Previously presented) The intraoral data input tool of claim 12 wherein
2 said clamp is a c-clamp and said head is discoid having a concave
3 circumferential surface, said concave circumferential surface retaining said c-
4 clamp.

1 50. (Previously presented) A dental data input system as in claim 17 wherein
2 said stylus includes a graduated end for periodontal probing.

1 51. (Previously presented) A dental data input system as in claim 50 wherein
2 said stylus includes a knee adjacent to said graduated end, said stylus being
3 configured to allow data input with said knee.

1 52. (Previously presented) A dental data input system as in claim 17 wherein
2 said stylus includes a graduated end configured for periodontal probing and a
3 second end configured for use in data input.

Appl. No. 10/817,055
Amendment dated April 6, 2007

1 53. (Previously presented) An intraoral data input tool for use during dental
2 examination of a patient, said tool comprising:
3 a rigid pan having a bottom surface and a side wall around the
4 periphery of said bottom surface;
5 a handle rigidly attached to said side wall of said pan;
6 a circuit board positioned within said pan, said circuit board
7 including push buttons and a display;
8 a mirror positioned centrally within said pan; and
9 a cover positioned over said circuit board, said cover being
10 configured to hermetically seal said circuit board within said pan;
11 wherein said push buttons are responsive to force applied by a
12 stylus, and wherein said intraoral data input tool is configured to allow a
13 dental examiner to input data using said stylus when said pan is comfortably
14 positioned at least partially within said patient's mouth.

1 54. (Previously presented) The intraoral data input tool of claim 53 further
2 comprising a platform with push buttons, said platform being rigidly attached
3 to said tool at the position where said handle is attached to said side wall of
4 said pan.

1 55. (Previously presented) The intraoral data input tool of claim 53 wherein
2 said circuit board has a central cutout, said mirror is positioned within said
3 central cutout of said circuit board, said cover is positioned over said mirror

Appl. No. 10/817,055
Amendment dated April 6, 2007

4 and said circuit board, and said cover is configured to hermetically seal said
5 circuit board and said mirror within said pan.

1 56. (Previously presented) The intraoral data input tool of claim 53 wherein
2 said mirror is positioned over said circuit board and said mirror has apertures
3 for said push buttons and said display, said cover is a gasket positioned
4 between said circuit board and said mirror, said gasket hermetically sealing
5 all of said apertures in said mirror and hermetically sealing said mirror to the
6 periphery of said pan.